FORAGE SUITABILITY GROUP

Loamy, Limy "LRU G" (AWC > 6")

10 - 14" ppt & 90 – 120 Freeze Free Days

FSG No.: GO64XG022WY

Major Land Resource Area (MLRA) : 64 – Mixed Sandy and Silty Tableland

Physiographic Features

This is an area considered mixed sandy and silty tableland. The average elevation ranges from 2,953 to 3,397 feet (900 to 1,200 m) increasing gradually from east to west. Most of the area is in ranches and farms. About three-fifths of the area is rangeland grazed primarily by livestock. The scenic Pine Ridge, an escarpment extending in a general east-west direction in the north central part of the area, has grassed areas and pine trees of commercial value. Nearly one-third of the area is cropland. South of the Pine Ridge area, the major enterprise is cash-grain farming. In other parts of the area, feed and forage for livestock are the main crops.

The nearly level to gently sloping tableland south of the narrow, steep-walled valleys of Pine Ridge has the highest elevation. The topography north of the Pine Ridge escarpment is strongly sloping but becomes less sloping as distance from the escarpment increases.

Climatic Features

Average annual precipitation ranges from 15 to 18 inches per year (375 to 450 mm per year). Maximum preceipitation occurs during the growing season. Preceipitation in the winter is snow.

Most of the area depends on rather low and erratic preceipitation for water. Ground water is scarce and of poor quality in most of the area. Water for livestock is in the form of runoff captured in dams and some developed springs.

This is in Land Resource Area "G". The precipitation in this LRU is 10 to 14 inches and has a freeze free period of 90 to 120 days.

There is a wide variation in freeze free days and precipitation in this MLRA. Please be sure and visit with the local field office for site specific climatic information that is available in the Field Office Technical Guide, Section I, Climatic Data, http://www.nrcs.usda.gov/technical/efotg/ or refer to the National Water and Climate Center web page at http://www.wcc.nrcs.usda.gov.

Soil Interpretations

This group consists of deep, medium textured soils. The loam soils tend to be mellow and are easily worked, and have a pore-size distribution that results in good water retention and aeration. These soils have a water holding capacity (AWC) of greater than 6 inches in 60 inches of root depth. They have few limitations for the management and growth of adapted plants. The permeability class ranges from slow to moderately rapid. The primary limitation to the soils in this group is the high lime content close to the soil surface. The lime reduces the availability of some plant nutrients. This reduces species choices and yield potential.

The soil survey maps were completed for the purposes of developing plans for tracts of land and can not be used to determine the soils on or the suitability of a specific site. Consequently, small areas of significantly different soils are not identified on the maps and may occur in any map unit.

Refer to Appendix A, Forage Suitability Group Rules in Section II, of the Field Office Technical Guide, Pastureland and Hayland Interpretations for the parameters used in grouping the soils.

Soil Map Unit List

For a complete listing of soil components and what Forage Suitability Group the soil is in, refer to Appendix B, Section II of the Field Office Technical Guide, Pastureland and Hayland Interpretations.

Adapted Species List

Refer to Appendix C, Adapted Species for Forage Suitability Groups in Section II of the Field Office Technical Guide, Pastureland and Hayland Interpretations or access the electronic adapted species list at http://efotg.nrcs.usda.gov/references/public/WY/10-14_INCH_PRECIPITATION_ZONE_ADAPTED_SPECIES_MATRIX_64_APPENDIX_C.pdf. Additional information concerning plant characteristics of a number of the listed species as well as individual cultivars of many of those species can be accessed on the web at http://plants.usda.gov.

Production Estimates

Production estimates are based on management intensity (fertility regime, irrigation water management, harvest timing, etc.) and should be considered as estimates only. The estimates should only be used for making general management recommendations. On site production information should always be used for making detailed planning and management recommendations when available.

The high forage production estimates listed below are based on dense, vigorous stands of climatically adapted, superior performing cultivars. They are properly fertilized for high yields, and pest infestations are kept below economic thresholds. Mechanical harvests are managed to maintain stand life by cutting at appropriate stages of maturity and harvest intervals. If grazed, optimum beginning and ending grazing heights are adhered to. Adequate time is allowed for plant recovery before entering winter dormancy under both uses.

The production estimates listed below represent total annual above ground plant production on an air-dry-matter basis. Production on pastures in many instances is species dependent and depends if the pasture is a single species pasture or a mixture of grass species. To convert the information below to AUM's (Animal Unit Months), multiply the pounds per acre by 35 per cent and then divide by 790 (example: assume 2,800 pounds per acre: 2,800 X .35 ÷ 790 = 1¼ AUM's).

Irrigation: The expected production for grass would be from 3,100 to 4,700 pounds per acre. The expected production for legumes would range from 4 to 6 tons per acre.

Dryland: The expected production for grass would be from 400 to 800 pounds per acre. The expected production for legumes would range from 2 to 3 tons per acre.

Forage Growth Curves

LRU G

Growth Curve Number: WY0012
Growth Curve Name: Cool Season Grass
Growth Curve Description: Dryland (10 – 14" precipitation)

Percent Production by Month

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0	0	0	5	35	40	10	5	5	0	0	0

Growth Curve Number: WY0013
Growth Curve Name: Cool Season Grass
Growth Curve Description: Irrigated (10 – 14" precipitation)

Percent Production by Month

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0	0	0	5	20	30	25	15	5	0	0	0

Growth Curve Number: WY0008
Growth Curve Name: Legumes
Growth Curve Description: Irrigated (10 – 14" precipitation)

Percent Production by Month

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0	0	0	5	25	20	20	20	10	0	0	0

Growth Curve Number: WY0009
Growth Curve Name: Legumes/Cool Season Grass
Growth Curve Description: Irrigated (10 – 14" precipitation)

Percent Production by Month

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0	0	0	10	30	20	15	15	10	0	0	0

Growth Curve Number: WY0003
Growth Curve Name: Legumes
Growth Curve Description: Dryland (10 – 14" precipitation)

Percent Production by Month

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0	0	0	5	20	25	20	25	5	0	0	0

Growth Curve Number: WY0004
Growth Curve Name: Legumes/Cool Season Grass
Growth Curve Description: Dryland (10 – 14" precipitation)

Percent Production by Month

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0	0	0	10	30	30	15	5	10	0	0	0

Growth Curve Number: WY0005
Growth Curve Name: Warm Season Grass
Growth Curve Description: Dryland (10 – 14" precipitation)

Percent Production by Month

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0	0	0		10	40	35	15		0	0	0

Management

The relationship between soils, vegetation and climate on any given site is historically driven by the ability of the plants to grow and change as conditions warrant and has allowed various species to express themselves naturally. Under agronomic conditions, production-enhancing practices have altered the original limits of the biomass production. The modification of growth factors, customized selection of species and wise use of a variety of management practices have the potential to produce yields and quality far superior to those found in the native state.

These soils when in forage management system should see organic matter at a steady or a slowly climbing state. If erosion from either wind or water is a concern, the current erosion prediction tool should be used to ensure that the erosion concern is addressed properly. Refer to the pasture and hayland planting standard or the forage harvest standard in the Field Office Technical Guide, Section IV for further management information. The impact on yields can be reduced by selecting forage species that are tolerant of the high lime levels inherent to thes soils.

FSG Documentation

Data References:

Agriculture Handbook 296 - Land Resource Regions and Major Land Resource Areas
Natural Resources Conservation Service, National Water and Climate Center (NWCC)
National Soil Survey Center, National Soil Information System (NASIS)
National Range and Pasture Handbook
Natural Resources Conservation Service, Field Office Technical Guide (FOTG)
Various Agriculture Research Service (ARS), Cooperative Extension Service (CES), and Natural Resources Conservation Service (NRCS) information on plant trials for adaptation and production.
"Dryland Pastures in Montana and Wyoming" Species and Cultivars, Seeding Techniques and Grazing Management, Montana State University, EB19

State Correlation:

Similar FSG's:

Similar FSG's in South Dakota would be: Limy Upland

This site has been correlated with the following states:
SD

Forage Suitability Group Approval:

Original Author:	Douglas A. Gasseling, CPAg, CPESC, CCA
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Approval by:	Paul Shelton
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